

## Information Content

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### Comments

L-0044/134

Based upon our reviews of the first draft of the HSW-EIS and this revision, we continue to be concerned about certain significant issues. For this document to be satisfactory to support the Ecology's environmental reviews required by the State Environmental Policy Act (SEPA) prior to the issue of dangerous waste permits, as implemented in WAC 197-11 and WAC 173-802, the issues identified below must be resolved.

A provision in WAC 197-11-400(3) requires that environmental impact statements be "concise, clear, and to the point". The complexity of the RHSW EIS and its supporting Appendixes preclude ease of review by the public and the agencies.

Per WAC 197-11-440(5)(b)(i), selection of reasonable alternatives is "intended to limit the number and range of alternatives, as well as the amount of detailed analysis for each alternative." The multiplicity and complexity of alternatives for disposal based upon waste streams and locations precludes a concise explanation of the environmental impacts.

### Response

The HSW EIS summarizes its analyses in seven (7) sections in a first volume. The supporting technical detail is presented in fifteen (15) appendixes in a second volume. The Comment Response Document makes up the third and fourth volumes of the HSW EIS.

The summary has been substantially revised in response to comments and consistent with CEQ regulations (40 CFR 1502.12). The summary presents the major conclusions, areas of controversy, including issues raised by the public, and highlights of the analyses of the EIS. Subject matter references have been added where they are considered helpful to the general reader.

DOE believes this HSW EIS complies with applicable NEPA requirements.

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### Comments

E-0043/033, EM-0217/033, EM-0218/033, L-0056/033, LM-0017/033, LM-0018/033

Fourth, the EIS should quantitatively analyze all possible air and noise quality impacts compared to current air and noise quality. Instead the EIS merely states that certain standards have not been exceeded. To show quantitative impact, the EIS should quantitatively compare present noise and air quality to that of the noise and air quality of the alternatives.

P-0143/003

So far the USDOE EIS has not adequately addressed the serious issues.

TRI-0001/003

Description of the existing conditions needed to be adequate in order to describe alternatives for solid waste that include description of the alternatives for mitigation and remediation and bring facilities into compliance.

### Response

Volume I Section 4 provides a description of the environment that might be affected by the alternatives described in Volume I Section 3. The results of analyses performed to assess potential environmental consequences of implementing the alternatives are presented in Volume I Section 5. Volume II Appendix A through Appendix O provide information to support the analyses in Volume I Section 1 through Section 6.

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### Comments

L-0021/003, TSE-0015/003

And what effect would that [disposal of additional radioactive solid waste at Hanford] have on the region? Without an adequate EIS, we honestly don't know. The Department of Energy needs to fully disclose potential impacts on the Columbia River and the fishery. It needs to determine the baseline data, and have monitoring in place before any more waste is brought in. Before we can know the total impact of adding more, USDOE must disclose the impacts from the burial grounds and other wastes already in the soil.

### Response

Volume I Section 4 provides a description of the environment that might be affected by the alternatives described in Volume I Section 3. The results of analyses performed to assess potential environmental consequences of implementing the alternatives are presented in Volume I Section 5. Volume II Appendix A through Appendix O provide information to support the analyses in Volume I Section 1 through Section 6.

DOE maintains an extensive radiological and hazardous chemical monitoring network for groundwater, surface water, air, and biological resources. The results of these analyses are summarized in the annual Hanford Site Environmental Report (Poston et al. 2002) and the annual Groundwater Monitoring Report (Hartman et al. 2002).

The HSW EIS evaluates impacts to the Columbia River and downstream populations for about 10,000 years. For all alternatives analyzed in this HSW EIS, DOE has analyzed the long-term movement of contaminants through soil and groundwater to the Columbia River. In all cases, it found that the water quality of the Columbia River would be virtually indistinguishable from the current river background levels. The concentrations of all the constituent contaminants were well below benchmark drinking water standards at a hypothetical well located near the Columbia River. The impacts of groundwater reaching the river are discussed in Volume I Sections 5.3 and Volume II Appendix G. See also Volume I Section 5.11 and 5.14 and Volume II Appendixes F and L.

The HSW EIS uses the definition of cumulative impact as defined by the CEQ Regulations (40 CFR 1508.7): "Cumulative impact" is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Potential cumulative impacts associated with implementing the HSW EIS alternative groups are summarized in Volume I Section 5.14. Past, current, and future Hanford activities include treatment and disposal of tank waste, CERCLA remediation projects, previously disposed of waste, decontamination and decommissioning of the Hanford production reactors and other facilities, waste in the PUREX tunnels, operation of a commercial LLW disposal facility by U.S. Ecology, and operation of the Columbia Generating Station by Energy Northwest. Cumulative impacts of storage, treatment, and disposal activities for a range of waste volumes are evaluated and expanded in the final HSW EIS. For most resource and potential impact areas, the combined effects from the alternative groups for the Hanford Only, Lower Bound and Upper Bound waste volumes, or for the No Action Alternative for the Hanford Only and Lower Bound waste volumes, when added to the impacts of these other activities, are small.

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### Comments

E-0043/007, EM-0217/007, EM-0218/007, L-0056/007, LM-0017/007, LM-0018/007

NEPA mandates that "no material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment." 40 CFR 1502.21. DOE has failed to follow this requirement. DOE should provide pinpoint citations for many references.

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E-0043/008, EM-0217/008, EM-0218/008, L-0056/008, LM-0017/008, LM-0018/008

The EIS reference list should summarize and discuss the underlying assumptions, definitions, and prior documentation behind the referenced documents, which may be different than the assumptions made in the HSW EIS. Any conflicting assumptions should be pointed out and addressed.

E-0043/049, EM-0217/049, EM-0218/049, L-0056/049, LM-0017/049, LM-0018/049

Further, DOE has provided Internet addresses for only some of the referenced documents. DOE has shown that providing Internet addresses for referenced documents is reasonable by providing such addresses for some documents. Therefore, DOE should provide Internet addresses for all referenced documents.

E-0043/059, EM-0217/059, EM-0218/059, L-0056/059, LM-0017/059, LM-0018/059

A purpose of the HSW EIS is to help those with an interest in Hanford Site, the public and the workers among others, fully understand the consequences of DOE's proposal. This purpose can only be fulfilled by user-friendly data and a summary with a table of contents that is keyed for easy reference to the corresponding text of the full EIS.

For example, figure S.8 of the summary lumps existing disposal facilities with the proposed disposal facilities, combines key storage facilities with key processing facilities. Further, this figure shows only key storage and processing facilities, rather than all storage and processing facilities for proposed actions. This graphic should differentiate between the different types of facilities and further differentiate those facilities by the alternative with which it is associated.

A second example is table S.2, which claims to show the range of impacts during the operational period. The EIS should make clear that this range is not all inclusive, but merely an approximation.

A third example is also found in table S.2. There the EIS states the 'number' of latent cancer fatalities in the public, while stating the 'probability' of latent cancer fatalities in non-involved workers. The actual number and the overall probability are important to the readers understanding; Each should be reported for both the public data and the worker data. The HSW EIS should compare 'apples to apples,' not 'apples to oranges.' Forcing the reader to do math in order to accurately compare data is not user-friendly. Further, DOE should state the data regarding latent cancer fatalities in involved workers at all. DOE should state the actual number and overall probability of latent cancer fatalities of involved workers in order for the reader to fully understand the consequences of DOE's proposal.

A fourth example is table S.3. There the EIS states the 'chances in a million' of a fatality to a lifetime onsite resident gardener, while stating the fatality data to a lifetime onsite resident gardener with a sauna/sweat lodge in terms of seven different denominators, none of which are 'chances in a million.' 'chances in 2000,' 'chances in 400,' 'chances in 300,' 'chances in 200,' 'chances in 100,' 'chances in 50,' 'chances in 10.' This is another 'apples to oranges' comparison. When the 'chances in 10' data is converted to 'chances in a million' data, the reader would see that in the Upper Bound range of waste volume, there '100,000 chances in a million' that a fatality to a lifetime onsite resident gardener with a sauna/sweat lodge would occur in the 200 area.

DOE provided Internet addresses to only some, but not all, for the documents incorporated by reference. DOE should provide an internet address in the reference list for all references. Additionally, the reference list should direct the reader to the page number(s) within the HSW EIS where the document is referenced, and provide a short summary of the reference's use in this EIS.

E-0043/075, EM-0217/075, EM-0218/075, L-0056/075, LM-0017/075, LM-0018/075

The HSW EIS states that DOE did not address the many "areas of controversy" identified during the public interaction process merely because "they reflect either differing points of views or uncertainties." Page S.42. Areas of controversy, whether resolved or not, should be accounted for within the HSW EIS quantitative analysis. Ignoring points of view different from that held by DOE is unacceptable. Accounting for areas of controversy within the EIS provides the reader with a more accurate picture of the many issues presented by

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the proposed actions.

L-0016/010

Concerning the difficulty in getting access to secondary sources, the response was simply not adequate. Saying that the sources are available in your reading room in Richland is about as useful as saying they're in the sub-basement of the library at the University of Illinois-they're very nearly as inaccessible. In simple self-defense, I've been forced to develop a reference library at home, taking up precious shelf space that I'd rather be using for books that are interesting to read. This isn't sufficient, however, as sources I don't have are constantly (and incompletely) cited, and even the ones I have are poorly indexed if they're indexed at all. Documents must be available in all repository libraries in the area, and at least one copy of each must be circulating.

### Response

All references were available during the public comment periods in the Hanford Reading Room in Richland, Washington, and by request through the NEPA document manager. See the Summary of the HSW EIS for example. While not required under NEPA, website addresses, for many references, were provided as an additional aid to the reader. In addition, several major references, such as the Waste Management Programmatic Environmental Impact Statement, were available on compact disc upon request.

DOE has followed CEQ requirements (40 CFR 1502.21) regarding incorporating material by reference.

The summary has been substantially revised in response to comments and consistent with CEQ regulations (40 CFR 1502.12). The summary presents the major conclusions, areas of controversy, including issues raised by the public, and highlights of the analyses of the EIS. Subject matter references have been added where they are considered helpful to the general reader.

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### Comments

L-0044/026

Vol. I, Sec.5.11 and Vol.II, App. F. Section 5.11 and Appendix F report an enormous quantity of results for several scenarios and several alternatives. It would benefit the reader to summarize the results and present the most significant findings.

### Response

Results are summarized in the Summary and in Volume I Section 3.4 of the EIS. The HSW EIS summary has been revised in response to comments and to incorporate new information. The summary presents the major conclusions, areas of controversy, including issues raised by the public, and highlights of the analyses of the EIS. Subject matter references have been added where they are considered helpful to the general reader.

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### Comments

F-0008/001

Without Columbia Riverkeeper and other concerned entities to help translate the issues many of us would be lost in analyzing a 3000 page document.

### Response

In an effort to help the reader, and consistent with CEQ regulations, a summary was prepared.

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### Comments

L-0044/067

The DOE has attempted to define the purpose of the HFFACO here. The three items provided (20-23) are unclear and not entirely consistent with the purposes provide in the TPA. (e.g., "and sets due dates," is not clear what the due dates are for). DOE should change this text to be consistent with the purposes provided in the HFFACO on page 5 of the Executive Summary.

L-0044/069

DOE makes a statement that "CERCLA is a federal statute designed to respond to past disposal of hazardous substances." CERCLA is intended to address releases or threatened releases of hazardous substances. The text should be corrected on both lines 32 and 33.

L-0044/070

DOE should list all of the dates that the State of Washington received authority from the EPA for programs, including the most recent one for LDR authority.

L-0044/092

Sec. 2.1.3, p. 2.9 The statement should be amended to indicate that storage of RH TRU at Hanford will continue after WIPP is certified to receive such wastes if any characterization, treatment or packaging is required at Hanford, since Hanford's capability to undertake these tasks is not scheduled until well after DOE's scheduled 2005 WIPP RH TRU acceptance date.

L-0044/099

Vol. I, Sec. 3.1.2.3, p. 3.9, Sec. 5.3.4.1, p. 5.39 Disposal determinations are inconsistent for Alternative A in the sections cited. P. 3.9, Sec. 3.1.2.3, states "The large WTP melters would be taken to a dedicated lined trench near PUREX for disposal." In contract, Sec. 5.3.4.1, p. 5.39, states "Melers disposed of after 2007 in 21-m (69-ft) deep trenches in LLBG 218-E-12B." Clarify which trench is included in Alternative A for the melters.

L-0044/109

Sec. 4.8.5, p. 4.91 The statement on line 9 "Route 11A from SR 240 near its intersection with SR 240" is confusing, and may contain an error.

L-0050/005

Page 4.70, Table 4.13. WDFW disagrees with DOE's response on the vaux's swift, and it should be included. The vaux's swift was included in TNC's inventory of bird species of conservation concern, and was documented on the Arid Lands Ecology Reserve.

L-0050/006

Page 4.71, paragraph 1. The statement "Washington State considers pristine shrub-steppe habitat as priority habitat." This is an incorrect statement; please remove the word "pristine". All shrub steppe habitat, regardless of condition, is considered by WDFW as a priority habitat.

L-0050/011

Page 5.75, second paragraph last sentence, indicates survey's for rare plants were performed during the summer field survey of 2002. Rare plants of the Columbia Basin are not identifiable in late July and early August. The best time of the year to survey for rare plants in the Central Hanford area is during the month of May (Caplow, personal communication).

### Response

The relevant portions of the HSW EIS have been revised in response to these comments.

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### Comments

L-0041/005

Complete additional analyses in the HSW-EIS as outlined in this letter and attached detailed comments.

Complete the Tanks Retrieval and Closure EIS and assess its impacts on the HSW-EIS.

### Response

The relevant portions of the HSW EIS have been revised in response to these comments.

DOE is preparing the Environmental Impact Statement for Retrieval, Treatment, and Disposal of Tank Waste and Closure of Single Shell Tanks at the Hanford Site (68 FR 1052), which will address the potential environmental impacts from retrieving and processing tank wastes. DOE will conduct appropriate environmental review to support future decisions for closing the vitrification plant (i.e., Waste Treatment Plant) and other existing treatment and associated facilities.

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### Comments

E-0043/019, EM-0217/019, EM-0218/019, L-0056/019, LM-0017/019, LM-0018/019

There are conflicting statements about groundwater plumes from disposal sites. For examples, see summary pages 32, 35, 36, and 37.

### Response

DOE could not identify any conflicts in these pages.

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### Comments

L-0016/004

...[there was] no index at all in the comment volume[.]

### Response

The CRD index of comments and persons commenting is located in Volume III Section 4.

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### Comments

L-0044/019

Vol. I, Sec. 3.5.3: One assumption made in the uncertainty section (3.5.3) is that variability in contaminant behavior and exposure effects are greater than inventory, release and environmental transport. This needs further explanation, especially since this EIS has large variability in inventory, release and transport data.

### Response

The text in Volume I Section 3.5 has been revised to clarify this.

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### Comments

L-0044/081

S.4, p. S.13 The last sentence in the first paragraph (lines 14-15) is not helpful or informative to the public. It should say what alternatives for waste types are and are not included.

### Response

The waste types evaluated in the HSW EIS are summarized in Section S.2 of the Summary, please refer to the text boxes in this section. The waste alternatives are summarized in Section S.6 of the Summary and described in more detail in Volume I Section 3.1.

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### Comments

L-0044/088

Secs. 1.4.3 and 1.4.4, p. 1.14 Reading these sections, one would never know that or how these activities relate to the EIS. Some of the alternatives considered arose out of the C3T process, and decisions made based on the EIS are essential to the PMP.

### Response

Volume II Appendix N in the revised draft EIS and the final HSW EIS expand on the C3T process and the HPMP (DOE-RL 2002). See also Volume I Section 1.4.

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### Comments

L-0050/003

Page 4.66. Please update the reptile discussion by adding the following reference: "Herpetofauna of the Hanford Nuclear Reservation, Grant, Franklin, and Benton Counties, Washington," Lisa A. Hallock, submitted to The Nature Conservancy, December 1998.

### Response

The HSW EIS uses all relevant references and reflects a long history of ecological monitoring at Hanford. This report did not add or delete any species and, therefore, was not used as a reference.

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### Comments

L-0044/079

S.2, p. SA.6 The statement in the first bullet (line 21) that sites with existing capability will continue to dispose of their own MLLW is misleading. Only Hanford and NTS [Nevada Test Site] have such capability and they were selected in the 2000 ROD as the sites for other DOE sites to use for MLLW disposal.

### Response

The text in the Summary has been revised to clarify use of MLLW disposal capability.

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### Comments

L-0016/002

One preliminary suggestion - that new text should be marked off somehow - in a different font, in parentheses, something - so that the new comments can focus on what hasn't already been covered.

### Response

Non-editorial changes in HSW EIS Volumes I and II are noted by change bars in the side margin.

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### Comments

L-0016/003

...the comments and answers were not adjacent [in the comment response volume.]

L-0016/005

To begin on a minor note, I would expect an agency that deals w/radionuclides to have a printer that can handle Greek letters. One of my suggestions was to add notations of the type of radiation each radionuclide produced - but the symbols  $\alpha$  (alpha),  $\beta$  (beta) &  $\gamma$  (gamma) were replaced by dashes in the response volume

L-0016/006

...the comment #s and the response #s were badly matched, making it very difficult to say which response was

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to which comment- sometimes the comment # was as much as ten off from the response #.

L-0016/011

I made 553 (or 544-the numbering is not consistent) comments

### Response

The Comment Response Document has been revised for easier reading.

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### Comments

L-0044/040

CRD, p. 3.95 (Re: Comment # 91) Adequately addressed, although the response should presumably reference Table G.3 (not Table G.4).

L-0044/041

CRD, p. 3.95-96 (Re: Comment #101) adequately addressed, although the Table number in the response appears incorrect (correct Table number is 5.34). According to this table (i.e., Radiological Consequences of Accidents at CWC), a “design-basis” earthquake may result in 3 LCFs, whereas a “beyond-design basis” earthquake results in 30 LCFs in an offsite population.

### Response

DOE regrets the error in the revised draft HSW EIS.

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### Comments

L-0044/050

Vol. I, Sec. 6.19, p. 6.19 Table 6-1. DOE includes a superscript that reads, “(a) Interim status currently, final status in process.” Interim status permits at Hanford were effectively terminated when the final Hanford RCRA Permit was issued in 1994. Several TSD units have been allowed to operate under interim status standards until final status standards could be developed and added to the Hanford RCRA Permit. DOE’s superscript should be deleted or revised to read, “currently operating under interim status standards; final status standards being developed.” (Reference: Letter, Greg Sorlie, Ecology, to Joel Hebdon, USDOE, “Rulemaking petition to amend the Dangerous Waste Regulations, Chapter 173-303 Washington Administrative Code,” dated December 19, 2002).

### Response

This table has been revised in response to the comment.

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### Comments

L-0044/084

Appendix A, pp. A.1 and A.28 It would helpful to the reader to include a clear statement as to whether, and if so, where, Section A.2 has changed from the first draft HSW-EIS. Also, the labeling of “Part 1” and “Part 2”, with the latter then opening as section A.1, though the tables in Part 1 are labeled A.1 and A.2, is quite confusing to the reader.

### Response

The only notable changes made in Volume II Appendix A between the draft and the revised draft HSW EIS were the addition of scoping comments for the Immobilized Low Activity Waste Disposal Supplemental Environmental Impact Statement (67 FR 45104).



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### Comments

TLG-0012/004

And I especially appreciate those graphics that you showed that rendered the volumes of materials that we're talking about. But I would like to see, in future documents, also some kind of graphic that shows this waste in terms of actual danger rather than volume, like if you could measure it in -- I notice there's a diagram here that talks about megacuries of different kinds of materials. And if you could show a graphic that, like your football field diagram, shows the actual radioactivity of these different kinds of waste so that those of us that don't really understand what this stuff is, we can at least grasp the danger of it and the potential risks involved, not necessarily just in terms of the volume of material that's going through here, but the different kinds of materials represent different levels of risk. And it's a bit misleading to just talk about cubic yards of material as if it's all the same risk.

TPO-0005/001

It [waste in the ground] has an effect on all of our lives. Not just the humans, but all the other creatures that live in our society.

TSE-0036/001

...whenever someone from the Department of Energy says the word risk, it sends chills up and down my spine. I mean, they have been deciding the risk for us for 50 years, and we are feeling the brunt of that right now.

### Response

A synopsis of risks and impacts is presented in the Summary and are compared in Volume I Section 3.4.

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### Comments

L-0055/052

Transport of TRU to WIPP might result in 18 additional accidents. Is this figure still valid in light of the recent three incidences that occurred when waste was being transferred down to WIPP?

### Response

Yes, the figure is still valid.

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### Comments

L-0044/101

Ecology received a copy of the West Valley Demonstration Project Waste Management Environmental Impact Statement for comment. Ecology noted that both the preferred Alternative A and the other Alternative B assume that LLW and MLLW will be transported to Hanford or the Nevada Test Site for disposal. Searching through the information provided in the RHSW EIS and SWIFT, reviewers could not determine if the volume of waste to be sent was included in the volume calculations for the Lower or Upper Bound volumes. Ecology requests that the USDOE add the volumes to those already in the RHSW EIS and analyze the impacts of receipt of those wastes for disposal.

### Response

Volume I Section 1.5 and Volume II Appendix C have been revised to clarify this.